JVC
VIDEO CASSETTE RECORDER
HR-V210E

VHS
PAL

INSTRUCTIONS

LPT0913-001A
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SAFETY FIRST

Safety Precautions

The rating plate and the safety caution are on the rear of the unit.

WARNING: DANGEROUS VOLTAGE INSIDE
WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE.

CAUTION
- When you are not using the recorder for a long period of time, it is recommended that you disconnect the power cord from the mains outlet.
- Dangerous voltage inside. Refer internal servicing to qualified service personnel. To prevent electric shock or fire hazard, remove the power cord from the mains outlet prior to connecting or disconnecting any signal lead or aerial.

WARNING
There are two different types of SECAM colour systems: SECAM-L, used in FRANCE (also called SECAM-West), and SECAM-B, used in Eastern European countries (also called SECAM-East).
1. This recorder can also receive SECAM-B colour television signals for recording and playback.
2. Recordings made of SECAM-B television signals produce monochrome pictures if played back on a video recorder of SECAM-L standard, or do not produce normal colour pictures if played back on a PAL video recorder with SECAM-B system incorporated (even if the TV set is SECAM-compatible).
3. SECAM-L prerecorded cassettes or recordings made with a SECAM-L video recorder produce monochrome pictures when played back with this recorder.
4. This recorder cannot be used for the SECAM-L standard. Use a SECAM-L recorder to record SECAM-L signals.

IMPORTANT
- Please read the various precautions on pages 1 and 2 before installing or operating the recorder.
- It should be noted that it may be unlawful to re-record pre-recorded tapes, records, or discs without the consent of the owner of copyright in the sound or video recording, broadcast or cable programme and in any literary, dramatic, musical, or artistic work embodied therein.

For Italy:
"It is declared that this product, brand JVC, conforms to the Ministry Decree n. 548 of 28 Aug.'95 published in the Official Gazette of the Italian Republic n. 301 of 28 Dec.'95"

The ⏻/I button does not completely shut off mains power from the unit, but switches operating current on and off. "⏻" shows electrical power standby and " I " shows ON.

Video tapes recorded with another recorder in the LP (Long Play) mode cannot be played back on this video recorder.

VHS **HQ**
PAL

● Cassettes marked "VHS" (or "S-VHS") can be used with this video cassette recorder. However, S-VHS recording is not possible with this model.
● HQ VHS is compatible with existing VHS equipment.

When the equipment is installed in a cabinet or a shelf, make sure that it has sufficient space on all sides to allow for ventilation (10 cm or more on both sides, on top and at the rear).

When discarding batteries, environmental problems must be considered and the local rules or laws governing the disposal of these batteries must be followed strictly.

Failure to heed the following precautions may result in damage to the recorder, remote control or video cassette.
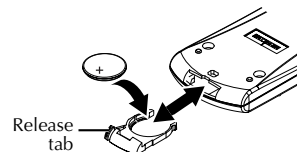1. DO NOT place the recorder …
   … in an environment prone to extreme temperatures or humidity.
   … in direct sunlight.
   … in a dusty environment.
   … in an environment where strong magnetic fields are generated.
   … on a surface that is unstable or subject to vibration.
2. DO NOT block the recorder's ventilation openings or holes. (If the ventilation openings or holes are blocked by a newspaper or cloth, etc., the heat may not be able to get out.)
3. DO NOT place heavy objects on the recorder or remote control.
4. DO NOT place anything which might spill on top of the recorder or remote control.
   (If water or liquid is allowed to enter this equipment, fire or electric shock may be caused.)
5. DO NOT expose the apparatus to dripping or splashing.
6. DO NOT use this equipment in a bathroom or places with water. Also DO NOT place any containers filled with water or liquids (such as cosmetics or medicines, flower vases, potted plants, cups, etc.) on top of this unit.
7. DO NOT place any naked flame sources, such as lighted candles, on the apparatus.
8. AVOID violent shocks to the recorder during transport.

MOISTURE CONDENSATION

Moisture in the air will condense on the recorder when you move it from a cold place to a warm place, or under extremely humid conditions—just as water droplets form on the surface of a glass filled with cold liquid. Moisture condensation on the head drum will cause damage to the tape. In conditions where condensation may occur, keep the recorder's power turned on for a few hours to let the moisture dry.

How to use the remote control

Before use, insert the lithium battery — CR2032 — correctly, with the plus(+) side up into the battery compartment. To open it, press the release tab and carefully, pull the compartment out. The remote control can operate most of your recorder's functions, as well as basic functions of JVC TVs.

Release tab

● Point the remote control towards the remote sensor on the target component. The maximum operating distance is about 8 m.
● To operate a JVC TV, use any of the following buttons: **TV** ⏻/I, **TV** ⊷, **TV PR +/−** or **TV** ◿+/−.

NOTE:

If the remote control does not work properly, remove its battery, wait for a few seconds, replace the battery and then try again.

Caution on Replaceable lithium battery

The battery used in this device may present a fire or chemical burn hazard if mistreated. Do not recharge, disassemble, heat above 100°C or incinerate.

Replace battery with CR2032. Panasonic (Matsushita Electric) or Maxell is recommended.

Danger of explosion or Risk of fire if the battery is incorrectly replaced.
■ Dispose of used battery promptly.
■ Keep away from children.
■ Do not disassemble and do not dispose of in fire.

Video heads cleaning

The heads get dirty in the following cases:
● in an environment prone to extreme temperature or humidity
● in a dusty environment
● flaw, dirt or mold on video tapes
● continuous usage for a long time
Use a dry cleaning cassette — TCL-2 — when:
● Rough, poor picture appears while a tape is played back.
● The picture is unclear or no picture appears.
● "USE CLEANING CASSETTE" appears on the screen (only with "O.S.D." set to "ON" (☞ 12)).

Usable cassettes

● Compact VHS camcorder recordings can be played on this recorder. Simply place the recorded cassette into a VHS Cassette Adapter and it can be used just like any full-sized VHS cassette.
● This recorder can record on regular VHS and Super VHS cassettes. However, it will record regular VHS signals only.
   * *S-VHS recording is not possible with this recorder.*
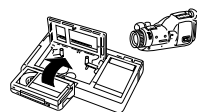
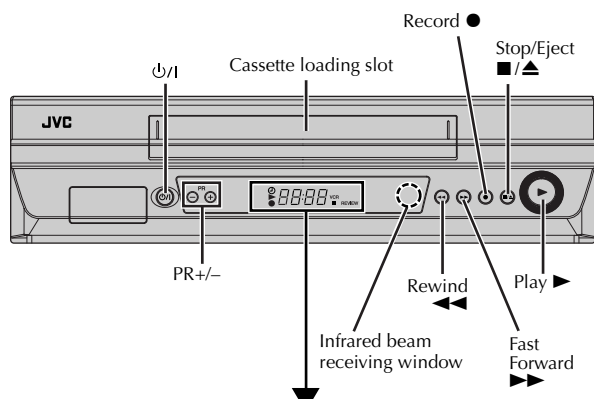**ATTENTION:**
TO MOBILE PHONE USER:
Using a mobile phone in the vicinity of the recorder may cause picture vibration on the TV screen or change the screen to a blue back display.
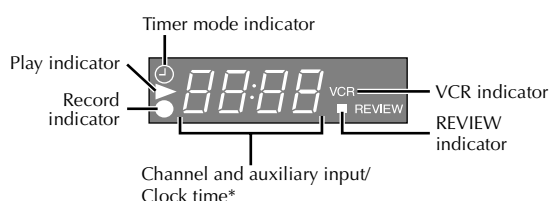**ON PLACING THE RECORDER:**
Some TVs or other appliances generate strong magnetic fields. DO NOT place such appliance on top of the recorder as it may cause picture disturbance.
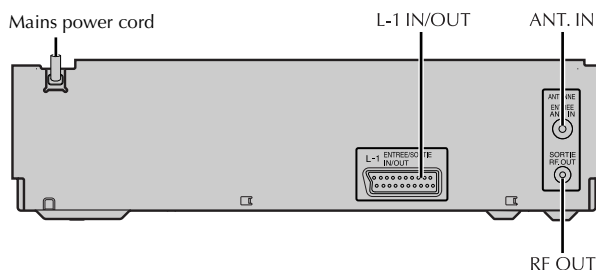

Buttons, Connectors and Indicators

Front Panel

- Record ●
- Stop/Eject ■ / ▲
- ⏻ / I
- Cassette loading slot
- PR+/–
- Rewind ◄◄
- Infrared beam receiving window
- Fast Forward ►►
- Play ►

Display panel

- Timer mode indicator
- Play indicator
- Record indicator
- Channel and auxiliary input/ Clock time*
- VCR indicator
- REVIEW indicator

* Each time you press – –:– –, the display panel shows the channel number and the clock time alternately.

Rear Panel

- Mains power cord
- L-1 IN/OUT
- ANT. IN
- RF OUT

Remote control

- TV ⏻ / I
- TV/VCR
- TV–⊕
- START ⊕/⊖
- STOP ⊕/⊖
- *VPS/PDC
- ✕ [0000]
- PROG
- ⊕ ?
- REWIND ◄◄ ⊟
- TV PR +/–
- REVIEW
- MENU
- STANDBY ⏻ / I
- AUDIO*
- number keys
- DATE ⊕/⊖
- DAILY
- WEEKLY
- AUX
- TIMER ⊙
- 30 SEC ⊞
- ////
- PLAY ►
- FAST FORWARD ⊟ ►►
- PAUSE II
- PR △/▽ ⊕/⊖
- TV ⊿ +/–
- I◄◄ ►►I ◁▷ +/–
- OK [ENTER ⊕]
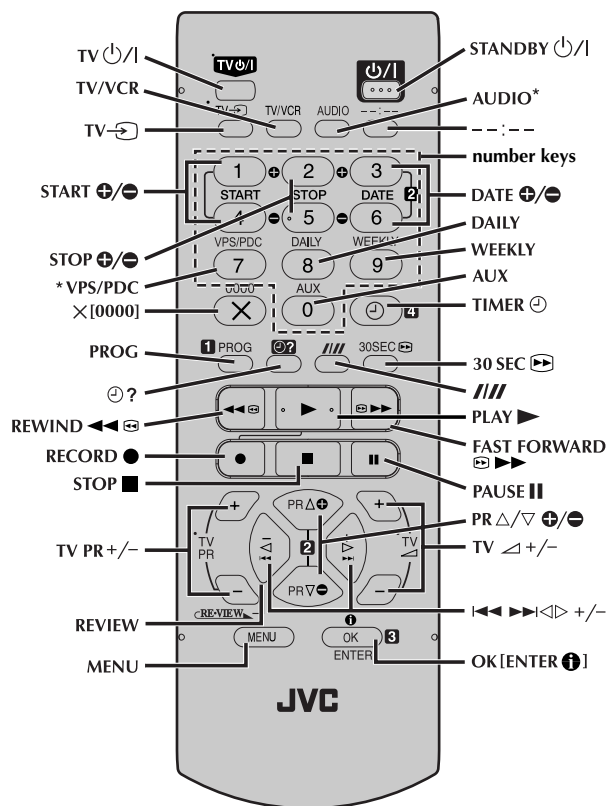
* Does not function with this recorder.

On-screen display

If you press ⊕ (OK) on the remote control when "O.S.D." is set to "ON" (☞ 12), you can see the current recorder status on the screen. To clear the on-screen display, press ⊕ (OK) again. The indications are not recorded even if the recorder is in the recording mode.
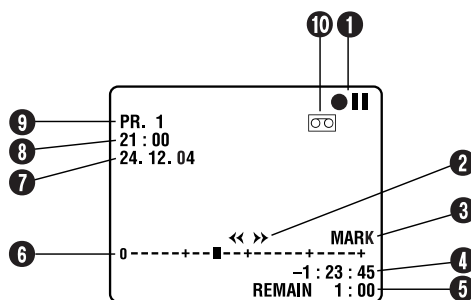
❶ Recorder operation mode
❷ Tape direction
❸ Mark indicator
❹ Time counter
❺ Tape remaining time
❻ Tape position*
  * The position of " ▮ " in relation to "0" (Beginning) or "+" (End) shows the current position on the tape.
❼ Current day/month/year
❽ Clock
❾ Channel and auxiliary input
❿ Cassette loaded mark

Basic Connections

1 Check contents

Make sure the package contains all of the accessories listed in "Specifications" (☞ 16).

2 Situate recorder

Place the recorder on a stable, horizontal surface.

3 Connect recorder to TV

Aerial connector

Back of TV

21-pin SCART connector

21-pin SCART cable (not provided)

RF cable (provided)

TV aerial cable

Mains power cord

ANT. IN

Back of recorder

L-1 IN/OUT

RF OUT

Mains outlet
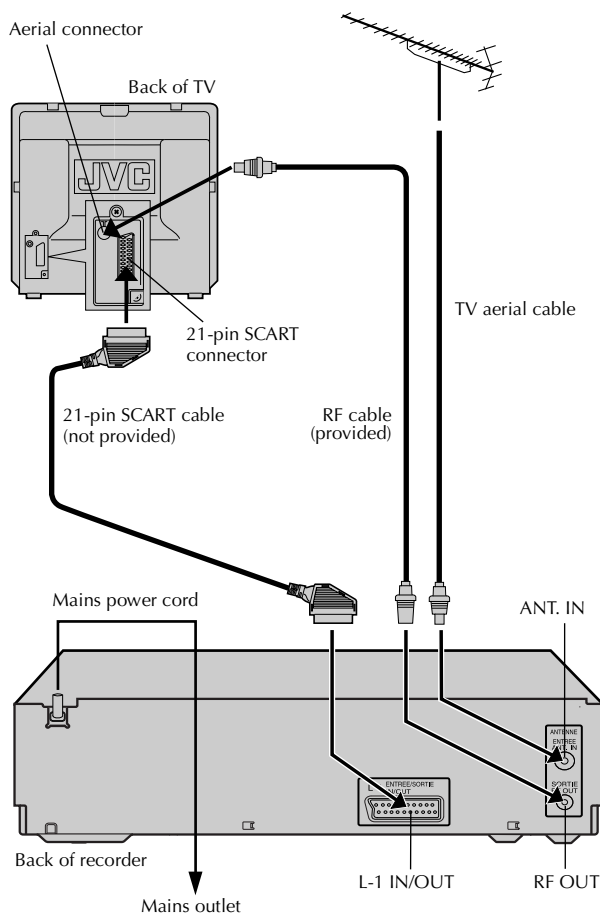
RF Connection

1 Disconnect the TV aerial cable from the TV.
2 Connect the TV aerial cable to the ANT. IN connector on the rear of the recorder.
3 Connect the provided RF cable between the RF OUT connector on the rear of the recorder and the TV's aerial connector.

AV Connection

If your TV is equipped with a 21-pin SCART connector, perform AV connection to improve picture quality during tape playback.
1 Connect the aerial, recorder and TV as shown in the illustration.
2 Connect an optional 21-pin SCART cable between the L-1 IN/OUT connector on the rear of the recorder and the TV's 21-pin SCART connector.

4 Connect recorder to mains

Plug the mains power cord into a mains outlet.

Initial Settings

After the ⏻/I is pressed for the first time to power on the recorder, the recorder starts Auto Set Up or Preset Download.

ATTENTION:
If you have connected the recorder to a TV offering T-V Link via a fully-wired 21-pin SCART cable and if the TV is turned on, the recorder automatically performs the Preset Download (☞ 6) even if you perform Auto Set Up.

Before starting:
● Perform "Basic Connections" (☞ 4).
● Set the TV to its AV mode (with AV connection) or UHF channel 36 (with RF connection).

Auto Set Up
— Auto Channel Set

> **ATTENTION:**
> While performing Auto Set Up for the first time,
> ● **do NOT** disconnect the recorder from the power supply (AC)
> ● **do NOT** press any button unless instructed
> ● ensure that Auto Set Up is not interrupted while the operation is still in progress

1 Turn on recorder

Press ⏻/I. The Country Set screen appears on the screen.
● If you have connected your TV to the recorder with RF connection and the on-screen display appearing on UHF channel 36 looks distorted, perform "Video Channel Set" (☞ 15).

```
☞ BELGIUM
   ČESKÁ REPUBLIKA
   DANMARK
   DEUTSCHLAND
   ESPAÑA
   GREECE
   NEXT PAGE
[▲▼] → OK
[MENU] : EXIT
```

2 Select your country
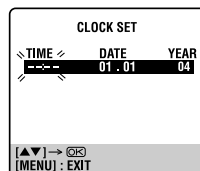
Press △▽ to place the pointer next to your country, then press **OK**. The language is automatically selected for the on-screen display depending on the country you have selected. The Clock Set screen appears.
● If you have selected BELGIUM or SUISSE, the Language Set screen appears. Press △▽ to place the pointer next to the desired language, then press **OK**.

3 Set time, date and year.

Press △▽ until the desired time appears, then press **OK** or ▷.
● Set the date and year in the same way. (Holding △▽ changes the time in 30-minute intervals, or changes the date in 15-day intervals.) Then press **MENU**.

```
        CLOCK SET
↘TIME↙   DATE    YEAR
--:--   01 . 01   04

[▲▼] → OK
[MENU] : EXIT
```

4 Perform Auto Set Up

Press △▽ to place the pointer next to "AUTO SET" and press **OK** or ▷.
● **Do NOT** press any button during Auto Set Up.

```
☞ AUTO SET
   T-V LINK

[▲▼] → OK
[MENU] : EXIT
```

5 Check results

If Auto Channel Set has been performed successfully
Turn on the TV and select its video channel or AV mode. Then make sure that all necessary stations have been stored in the recorder's memory by using the **PR** button(s).

```
      VCR
  /   □ REVIEW
```

If Auto Channel Set has failed,
Make sure the cables are connected properly. Press **OK** to retry or turn off the recorder once, then turn the recorder back on again. The Country Set screen appears on the screen. Perform "Auto Set Up" or "Preset Download" (☞ 6) again.

Preset Download
— Auto Channel Set by downloading preset data from TV

ATTENTION:
You can use this function only with a TV offering T-V Link, etc.* Be sure to use a fully-wired 21-pin SCART cable.
* *Compatible with TVs offering T-V Link, EasyLink, Megalogic, SMARTLINK, Q-Link, DATA LOGIC or NexTView Link via fully-wired 21-pin SCART cable. The degree of compatibility and available functions may differ by system.*

Before starting:
Perform steps **1** – **2** of "Auto Set Up" (☞ 5).

1 Perform Preset Download

Press △▽ to place the pointer next to "T-V LINK" and press **OK** or ▷.
● **Do NOT** press any button during Preset Download. When Preset Download is completed, "COMPLETED" appears for about 5 seconds, then the normal screen appears.

```
          AUTO SET

          ☞ T-V LINK



          [▲▼] → ㏇
          [MENU] : EXIT
```
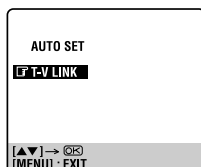
2 Check results

Perform step **5** of "Auto Set Up" (☞ 5).

3 Set video channel to off

Perform "Video Channel Set" (☞ 15).

NOTES:
● *Depending on the area, the recorder cannot perform Auto Set Up or Preset Download properly.*
● *If you have moved to a different area, perform "Video Channel Set" (☞ 15) (with RF connection), "Tuner Set" (☞ 13) and "Clock Set" (☞ 13) as required.*
● *If a new station starts broadcasting in your area, perform "Tuner Set" (☞ 13) and, if necessary, "Video Channel Set" (☞ 15).*

Language Set
You can change the language setting manually as required.

1 Access Main Menu screen, then Auto Channel Set screen

Press **MENU**. Press △▽ to place the pointer next to "AUTO CH SET", then press **OK** or ▷.

```
          MAIN MENU

          MODE SET
          ☞ AUTO CH SET
          MANUAL CH SET
          CLOCK SET


          [▲▼] → ㏇
          [MENU] : EXIT
```

2 Select your country

Press △▽ to place the pointer next to your country, then press **OK** or ▷.

3 Select language

Press △▽ to place the pointer next to the desired language.
● You do not have to press **OK**; pressing **OK** enters AUTO SET/T-V LINK screen.

4 Return to normal screen

Press **MENU**.

T-V Link Functions

When you connect the recorder to your TV via a fully-wired 21-pin SCART cable, the following functions are available. You can use these functions only with a TV offering T-V Link, etc.* For details, refer to the instruction manual of your TV.
* *Compatible with TVs offering T-V Link, EasyLink, Megalogic, SMARTLINK, Q-Link, DATA LOGIC or NexTView Link via fully-wired 21-pin SCART cable. The degree of compatibility and available functions may differ by system.*
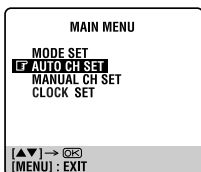
TV Auto Power On
The TV will turn on and be set to its AV mode automatically whenever you play a tape.

VCR Auto Standby
You can use your TV's remote control to turn off the recorder.

Direct Rec
You can easily start recording the programme that you are watching on your TV. When you use this function, set "DIRECT REC" to "ON". (☞ 12)

Playback

Basic Playback

> Turn on the TV and select the video channel or AV mode.

▌1 Load a cassette

Make sure the window side is up, the rear label side is facing you and the arrow on the front of the cassette is pointing towards the recorder.
- Do not apply too much pressure when inserting.
- The recorder turns on, and the counter is reset, automatically.
- If the cassette's record safety tab has been removed, playback begins automatically.

▌2 Start playback

Press ►.

During playback

Stop playback

Press ■ on the remote control. **OR** Press ■/▲ on the recorder.

Pause playback and view still picture

Press ▋▋.
- Press ► to resume normal playback.
- If there is vertical jitter, press **PR** △/▽ on the remote control or **PR+/–** on the recorder to correct the picture.

Pause and Frame-by-Frame playback

Press ▋▋ to pause, then press ▷ or ▋▋ repeatedly.
- Press ► to resume normal playback.

Picture Search

Press ◄◄ or ►►. Press ◄◄ or ►► again to perform high-speed search.
- Each time you press ◄◄ or ►►, the search speed changes between low-speed and high-speed.
- Press ► to resume normal playback.

Variable Speed Search (including slow-motion)

Press ◁ or ▷ repeatedly.
- Press ► to resume normal playback.
- Each time you press ◁ or ▷, the playback speed changes. To decrease the speed during picture search, press the opposite direction button repeatedly.
- During still picture, press and hold ▷ to start forward slow motion playback. When you release the button, still picture resumes. During still picture, holding ▋▋ for more than 2 seconds also starts forward slow motion playback. If you press ▋▋ again, still picture resumes.
- During slow motion playback, some noise may appear on the TV screen. Press **PR** △/▽ on the remote control or **PR+/–** on the recorder to eliminate the noise.

Reverse				Forward
Reverse search 3 steps	Reverse play	Slow motion 1 step	Normal play	Forward search 4 steps

When the tape is not running

Rewind/fast-forward

Press ◄◄ or ►►.

Eject the cassette

Press ■/▲.
- You can also eject the cassette when the recorder is turned off.

Turn off the recorder

Press ⏻/I.

> **ATTENTION:**
> In the search, still, slow-motion or frame-by-frame playback mode,
> - the picture will be distorted
> - the noise bars will appear

Playback Features

Adjusting tracking condition

Automatic tracking adjustment
When a new cassette is loaded, the recorder enters the automatic tracking mode.
Manual tracking adjustment
If automatic tracking cannot eliminate noises well during playback, adjust the tracking manually.

On the remote control:
▌1 Press ▌/▌▌ to activate manual tracking.

▌2 Press **PR** △ or ▽ to eliminate the noises. Press it briefly for a fine adjustment, or press and hold for a coarse adjustment.
- Press ▌/▌▌ again to reactivate automatic tracking.

Automatic operations after rewinding
— Next Function Memory

The Next Function Memory "tells" the recorder what to do after rewinding. Ensure that the recorder is in stop mode.
- **For Automatic Playback Start**
Press ◄◄, then press ► within 2 seconds.
- **For Automatic Power Off**
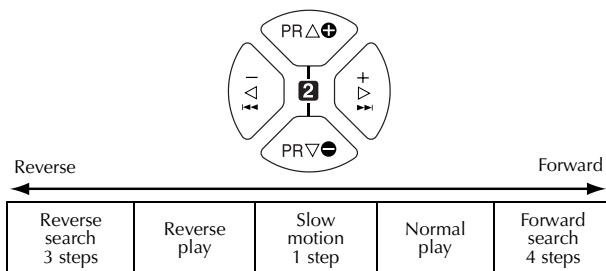Press ◄◄, then press ⏻/I within 2 seconds.
- **For Automatic Timer Standby**
Press ◄◄, then press ⏱ within 2 seconds.

NOTE:
It is not possible to select the Automatic Timer Standby function if the cassette's record safety tab is removed.

Playing back tape repeatedly (100 times)
— Repeat Playback

During playback, press and hold ► for more than 5 seconds. "▷" on the display panel starts blinking slowly. To stop playback, press ■ on the remote control or ■/▲ on the recorder.

NOTE:
Pressing ►, ◄◄, ►► or II also stops Repeat Playback.

Locating beginning of recordings
— Index Search

Index codes are placed on the tape at the beginning of each recording when recording on this recorder.

**1** While the tape is not running, press ◁ or ▷ (I◄◄ or ►►I) to start search.

2 To access a recording of 2 to 9 index codes away, press ◁ or ▷ (I◄◄ or ►►I) repeatedly until the correct number is displayed on the screen (only if "O.S.D." is set to "ON" (☞ 12)).

```
                          ►►  2


 ()------------■-------   »
                        −1 : 23 : 45
                        REMAIN   1 : 00
```

Example:
To locate the beginning of B from the current position, press ◁ twice.
To locate the beginning of D from the current position, press ▷ once.

● Playback begins automatically when the desired recording is located.

Current position

A	B	C	D	E	F
−2	−1	1	2	3	

◁   ▷

Index number
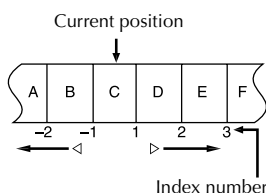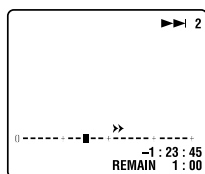
Locating beginning of timer recordings
— Instant Review

After ensuring that the recorder is turned off and that the timer mode is disengaged, press **REVIEW**.

● The recorder turns on, and rewinds to the index code indicating the beginning of the last timer-recorded programme, then begins playback automatically.
● You can access a programme as far as 9 index codes away from the current tape position.
● The Instant Review function can also operate if the recorder is turned on.

```
21 :00  VCR
         □ REVIEW
```
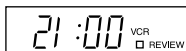
Skipping unwanted portions
— Skip Search

Press **30 SEC** ▷ once to 4 times during playback. Each press initiates a 30-second period of high-speed playback (up to 2 minutes). When the specified portion of the tape is skipped, normal playback resumes automatically. To return to normal playback during Skip Search, press ►.

Recording

Accidental erasure prevention
To prevent accidental recording on a recorded cassette, remove its record safety tab. To record on it later, cover the hole with adhesive tape.
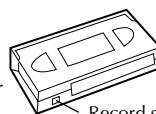
Record safety tab

Basic Recording

Turn on the TV and select the video channel or AV mode.

1 Load a cassette
Make sure the record safety tab is intact. If not, cover the hole with adhesive tape before inserting the cassette.
● The recorder turns on, and the counter is reset, automatically.

2 Select recording channel
Press **PR** △/▽ or the **number keys** on the remote control or **PR+/−** on the recorder.
● You can select channel in the stop mode or recording pause mode.

3 Start recording
On the recorder, press ●. Or on the remote control, while holding ●, press ►.

NOTE:
If the tape reaches its end during recording, the recording stops and "○" and "▷" on the display panel blink. Press ■/▲ on the recorder to eject the cassette or press ◄◄ to rewind the tape.

During recording
Pause recording
Press II. ● Press ► to resume recording. ● You can select channel in the recording pause mode.
Stop recording
Press ■ on the remote control.   **OR** Press ■/▲ on the recorder.

Recording Features

Recording Resume Function

If there is a power outage during recording (or Instant Timer Recording, or timer recording), the recording will resume automatically when the power is restored to the recorder. (No setting is required for this function.)

NOTE:
If a power outage exceed the recorder's memory backup time, Recording Resume Function does not work.

Tape Remaining Time/Time Counter

Press **– –:– –** to display the tape remaining time and time counter on the screen. To reset the time counter, press **0000**.

NOTES:
- *Set "O.S.D." to "ON" to display the indications on the screen. (☞ 12)*
- *Depending on the type of tape used, the tape remaining time may not appear right away, or is not correct. "– –:– –" may sometimes appear, or the display may blink on occasion.*

Watching one programme while recording another

If your recorder is connected to the TV via the AV connection (☞ 4), press **TV/VCR**. The recorder's VCR indicator and the TV broadcast being recorded disappear. Once recording is in progress, all you need to do is to set the channel controls on the TV for the station you wish to view.
- The programme selected with the TV's channel controls appears on the screen, while the one selected with the **PR** △/▽ on the remote control or **PR+/–** on the recorder is recorded on the tape.

Specifying recording length — Instant Timer Recording (ITR)

During recording, press ● on the recorder repeatedly until the desired recording length appears on the display panel. "○" on the display panel starts blinking.
- Each time you press the button, recording length increases in 30-minute intervals (up to 6 hours).
- The recorder turns off after recording is finished.
- To cancel an ITR, press ■ on the remote control or ■/▲ on the recorder.

Timer Recording

Up to 8 timer recording programmes can be made.

Before starting:
- Set the clock properly. (☞ 13)
- Set "COLOUR SYSTEM" to the appropriate mode. (☞ 12)
- Load a cassette with the record safety tab intact.

NOTES:
- *If all the 8 programmes have already been set, "PROGRAM FULL" appears on the screen.*
- *If the clock is not set, "CLOCK MUST BE SET" appears on the screen.*
- *After timer recording is completed, the recorder turns off automatically.*
- *If the tape reaches its end during timer recordings, the recording stops and "⊕", "○" and "▷" on the display panel blink. Press ⊕ to disengage timer, then press ■/▲ on the recorder to eject the cassette or press ⏻/I then press ◀◀ to rewind the tape.*
- *You can programme the timer recording while a regular recording is in progress; the menu screens will not be recorded.*
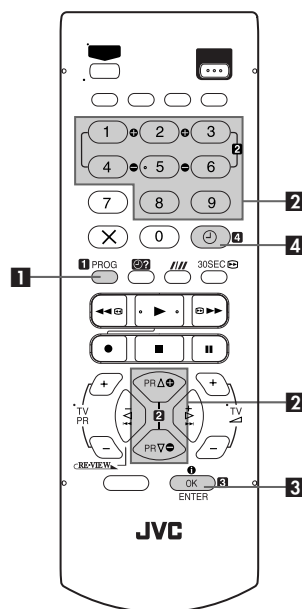
Express Timer Programming

1 Press **PROG**. The program screen appears.

2 Press **START ⊕/⊖** (**number keys "1" and/or "4"**), **STOP ⊕/⊖** (**number keys "2" and/or "5"**), **DATE ⊕/⊖** (**number keys "3" and/or "6"**) or **PR ⊕/⊖** repeatedly to enter the start time, stop time, date or channel.
- Press and hold **START ⊕/⊖** or **STOP ⊕/⊖** to increase the time in 30-minute intervals.

- To timer-record daily (Monday–Friday) or weekly serials, press **DAILY** (**number key "8"**) or **WEEKLY** (**number key "9"**). Pressing the button again makes the "DAILY" or "WEEKLY" display disappear.

3 Press **OK** or **PROG**.
- If "PROGRAM OVERLAPPED" appears, see "Program overlap warning display" (☞ 10).

4 Press ⊕. The recorder turns off automatically and "⊕" is displayed on the display panel.
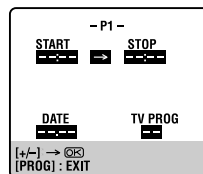
Checking, cancelling or changing programme settings

1 Disengage timer recording standby mode

Press ⏲, then press ⏻/I.
● When "AUTO TIMER" is set to "ON" (☞ 12), press only ⏻/I.

2 Access Program Check screen

Press ⏲ **?**.

```
         START   STOP   CH   DATE
  1       8:00  10:00    3  24.12
  2      10:00  10:45    2  25.12
  3      11:30  13:00    1  25.12
  4
  5
  6
  7
  8
  [⏲?] : NEXT
```

3 Access Program screen

Press ⏲ **?** again. Each time you press ⏲ **?**, the next programme's screen appears.

```
              – P1 –
  START            STOP
  8:00    ➡       10:00

  DATE             TV PROG
  24.12              3
                    WDR
  [⏲?] : NEXT
```

4 Cancel or change programme setting

To cancel a programme, press ✕.
To change a programme, press the appropriate button: **START ⊕/⊖** (**number keys "1" and/or "4"**), **STOP ⊕/⊖** (**number keys "2" and/or "5"**), **DATE ⊕/⊖** (**number keys "3" and/or "6"**), **DAILY** (**number key "8"**), **WEEKLY** (**number key "9"**) and/or **PR ⊕/⊖**.

5 Return to normal screen

Press ⏲ **?** repeatedly until no Program screen is shown.

6 Re-engage timer recording standby mode

Press ⏲. The recorder turns off automatically and "⏲" is displayed on the display panel.
● When "AUTO TIMER" is set to "ON" (☞ 12), the timer recording standby mode automatically resumes when you turn off the recorder.

Program overlap warning display

If "PROGRAM OVERLAPPED" appears, you have another program overlapping the program you have just made. The Program Check screen appears and conflicting programs will start blinking.

```
                                       START   STOP   CH   DATE
  PROGRAM OVERLAPPED             1      8:00  10:00    3  24.04
                          ➡      2     10:00  10:45    2  25.04
                                 3     11:30  13:00    1  25.04
                                 4      9:00  10:00   92  DAILY
                                 5
                                 6
                                 7
                                 8
                                 |▲▼ | → ⊙⊗      [PROG] : EXIT
```

Example:
Program 1 (you have just made) and Program 4 overlap each other

1 Select program to modify

Press △▽, then press **OK** or ▷.
● You can only select one of the overlapping programs.
● If you do not mind this overlap, press **PROG** to finish the timer program setting. The program starting earlier or program with the lower program number will be recorded.

```
         START   STOP   CH   DATE
  1       8:00  10:00    3  24.04
  2      10:00  10:45    2  25.04
  3      11:30  13:00    1  25.04
  4       9:00  10:00   92  DAILY
  5
  6
  7
  8
  |▲▼ | → ⊙⊗      [PROG] : EXIT
```

2 Cancel or change program setting

To cancel a program, press ✕ when the Program screen you do not want is shown.
To change a program, press the appropriate button: **START ⊕/⊖** (**number keys "1" and/or "4"**), **STOP ⊕/⊖** (**number keys "2" and/or "5"**), **DATE ⊕/⊖** (**number keys "3" and/or "6"**), and/or **PR ⊕/⊖** when the Program screen on which you want to make changes is shown, then press **OK** or ▷.
● If the overlap is not yet solved, the conflicting programs will be shown on the Program check screen. Repeat the above steps again.

```
              – P1 –
  START            STOP
  9:00    ➡       10:00

  DATE             TV PROG
  25.04              92
                    ARD
  [✕] : DELETE       [+/–] → ⊙⊗
  [PROG] : EXIT
```

Timer warning display

A warning appears on the TV screen to tell you that the timer-recording is to start in 5 minutes if you're not in the Timer mode at that time. The warning blinks for the entire 5 minutes leading up to the start of timer recording. To clear the display, press ✕ on the remote control.

```
         —WARNING—
      TIMER RECORDING
      TO START SOON
           ⌂[✕]
```
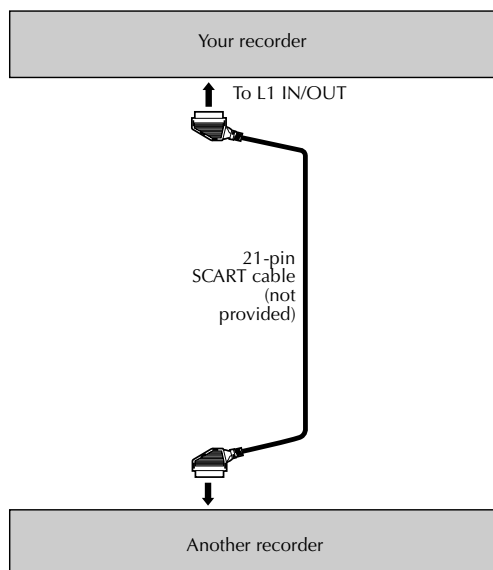
Editing

Editing with another video recorder or a camcorder

You can use your recorder as the source player or the recording deck. You can use a camcorder as the source player and your recorder as the recording deck. Refer also to the other components' instruction manuals for connection and its operations.

1 Make connections

Connection with another video recorder

```
┌──────────────────────────────────┐
│          Your recorder           │
└──────────────────────────────────┘
            ↑ To L1 IN/OUT

                    21-pin
                    SCART cable
                    (not
                    provided)

┌──────────────────────────────────┐
│         Another recorder          │
└──────────────────────────────────┘
```

Connection with a camcorder
Connect the camcorder's AUDIO/VIDEO OUT connectors to the recorder's L-1 IN/OUT connector via a cable adapter.

2 Load cassettes

Insert the playback cassette into the source player and the cassette to be recorded on into the recording deck.

3 Select input mode on recording deck

Select the correct external input on the recording deck. On this recorder, press **AUX** or **PR** △/▽ on the remote control or **PR+/–** on the recorder.
Select "L-1" for the L-1 IN/OUT connector.

4 Select edit mode

Select the appropriate edit mode for the components if such a mode is equipped.
● On this recorder, set "PICTURE CONTROL" to "EDIT". (☞ 12)

5 Start playback

Engage the Play mode of the source player.

6 Start recording

Engage the Record mode of the recording deck.
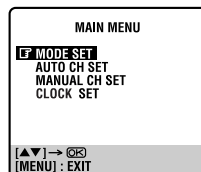
Subsidiary Settings

Mode Set

You can change various mode settings.

> Turn on the recorder and the TV, and set your TV to its AV mode or video channel.
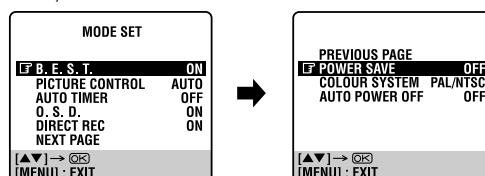
1 Access Main Menu screen, then Mode Set screen

Press **MENU**. Press △▽ to place the pointer next to "MODE SET", then press **OK** or ▷.

```
┌──────────────────────────────┐
│          MAIN MENU           │
│  ☞ MODE SET                  │
│     AUTO CH SET              │
│     MANUAL CH SET           │
│     CLOCK SET               │
│                              │
│  [▲▼] → ⓄⓀ                  │
│  [MENU] : EXIT               │
└──────────────────────────────┘
```

2 Select mode

Press △▽ to place the pointer next to the item you want to set.

```
┌──────────────────────────┐      ┌──────────────────────────────┐
│        MODE SET          │      │      PREVIOUS PAGE           │
│  ☞ B. E. S. T.      ON   │      │  ☞ POWER SAVE         OFF    │
│     PICTURE CONTROL AUTO │  ➡   │     COLOUR SYSTEM  PAL/NTSC  │
│     AUTO TIMER      OFF  │      │     AUTO POWER OFF    OFF    │
│     O. S. D.        ON   │      │                              │
│     DIRECT REC      ON   │      │  [▲▼] → ⓄⓀ                  │
│     NEXT PAGE            │      │  [MENU] : EXIT               │
│  [▲▼] → ⓄⓀ              │      └──────────────────────────────┘
│  [MENU] : EXIT           │
└──────────────────────────┘
```

3 Change setting

Press **OK** or ▷. The default setting is **bold** in the following table. Press **MENU** to return to normal screen.

■ B.E.S.T. — ON / OFF

When B.E.S.T. (Biconditional Equalised Signal Tracking) system is set to "ON", the recorder checks the condition of the tape in use during playback and recording, and compensates to provide the highest-possible pictures. When B.E.S.T. works, "bESt" appears blinking on the display panel. B.E.S.T. takes place whenever you play back a tape or start recording after inserting a cassette.

NOTE:
The recorder checks the tape condition for about 7 seconds, then starts recording. To make sure you record the desired scene or programme completely, perform the following steps:

On the remote control:
[1] Press and hold **II**, and press ●. After about 7 seconds, the recorder re-enters Record Pause mode.
[2] Press ► to start recording.

■ PICTURE CONTROL — AUTO(NORM) / EDIT / SOFT

This function helps you to adjust the playback picture quality according to your preference.
AUTO(NORM): Normally select this. Picture quality is adjusted automatically. When "B.E.S.T." is "OFF", "NORM" will appear instead of "AUTO".
EDIT: Minimizes picture degradation during editing (recording and playback).
SOFT: Reduces image coarseness when viewing overplayed tapes containing much noise.

NOTE:
Select "EDIT" when you are editing tapes. After you finish editing, select "AUTO".

■ AUTO TIMER — ON / OFF

● **When this function is set to "ON":**
The timer recording standby mode is automatically engaged when the recorder is turned off. It is temporarily cancelled when the recorder is turned on. You do not have to press ⏲ to engage or disengage the timer recording standby mode.
● **When this function is set to "OFF":**
Press ⏲ to engage or disengage the timer recording standby mode.

■ O.S.D. — ON / OFF

When this function is set to "ON", various recorder status information (on-screen display) appears on the screen.

NOTE:
When you use the recorder as the source player for editing a tape, be sure to set this function to "OFF". Otherwise, the recorder status information will be recorded on the edited tape.

■ DIRECT REC — ON / OFF

When this function is set to "ON", you can easily start recording the programme that you are watching on your TV. Press and hold ● and press ► on the remote control, or press ● on the recorder.

NOTE:
When you use this function, be sure to use a TV offering T-V LINK, etc. and connect a fully-wired 21-pin SCART cable between the recorder and the TV.

■ POWER SAVE — ON / OFF

When this function is set to "ON", you can reduce the power consumption while the recorder is turned off.

NOTES:
● *During Power Save mode,*
  • *the display panel is turned off,*
  • *and the picture may be distorted momentarily when you turn on/off the recorder.*
● *Power Save does not work in the following cases:*
  • *when the recorder is in the timer recording standby mode,*
  • *or when the recorder's power is turned off after timer-recording or ITR (Instant Timer Recording).*

■ COLOUR SYSTEM — PAL/NTSC / MESECAM

You can play back PAL, NTSC and MESECAM tapes, or record PAL and SECAM* signals on this recorder. Select the appropriate colour system.
* *SECAM signals will be recorded as MESECAM on this recorder; MESECAM is the designation for tapes with SECAM signals that have been recorded on a MESECAM-compatible PAL video cassette recorder.*
PAL/NTSC: To record PAL signals, or playback a PAL or NTSC tape.
MESECAM: To record SECAM signals, or play back a MESECAM tape.

NOTES:
About NTSC Playback
● *Some TVs shrink the picture vertically and place black bars at the top and bottom of the screen, or cut off the top and bottom portions of superimposed displays. This is not a malfunction.*
● *The picture may roll up and down. This can be corrected if your TV has the V-HOLD control function.*
● *The counter and tape remaining time readings will be incorrect.*
● *During search, still, or frame-by-frame playback, the picture will be distorted, and there may be a loss of colour.*

■ AUTO POWER OFF — 3H / OFF

When this function is set to "3H", the recorder turns off automatically if no operation is done in 3 hours. "AUTO POWER OFF IN 3MIN" appears on the screen 3 minutes before the recorder is turned off.

Clock Set

> Turn on the recorder and the TV, and set your TV to its AV mode or video channel.

❶ Access Main Menu screen, then Clock Set screen
Press **MENU**. Press △▽ to place the pointer next to "CLOCK SET", then press **OK** or ▷.

❷ Set time, date and year
Press △▽ until the desired time appears, then press **OK** or ▷. Set the date and year in the same way.
● Holding △▽ changes the time in 30-minute intervals, or changes the date in 15-day intervals.

```
            CLOCK SET

       TIME      DATE      YEAR
       - - : - -  01 . 01    04



       [▲▼]→ OK
       [MENU] : EXIT
```
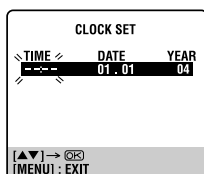
❸ Start clock
Press **MENU**.

Tuner Set

Perform the following steps only if the tuner has not been set correctly by Auto Set Up or Preset Download, or if you have moved to a different area, or if a new station starts broadcasting in your area.

The recorder needs to memorise all necessary stations in channel positions in order to record TV programmes. Auto Channel Set automatically assigns all receivable stations in your area.

> **ATTENTION:**
> After you performed Auto or Manual Channel Set, please do not disconnect the recorder from the power supply (AC) immediately (in approximately 40 seconds). If the recorder is disconnected from the AC outlet or if there is a power outage within this period, some channels and station names might not be stored correctly.
> Under such circumstances, please check for the stored channels and station names. If these are not stored correctly, please perform Auto or Manual Channel set again.

Auto Channel Set

❶ Access Main Menu screen, then Auto Channel Set screen
Press **MENU**. Press △▽ to place the pointer next to "AUTO CH SET", then press **OK** or ▷.
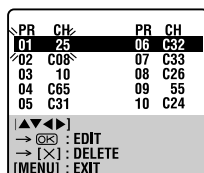
❷ Select your country
Press △▽ to place the pointer next to your country, then press **OK** or ▷.

❸ Select language
Press △▽ to place the pointer next to the desired language.

❹ Perform Auto Channel Set
Press **OK** twice. When Auto Channel Set is completed, "SCAN COMPLETED" is displayed on the screen for about 5 seconds, then the Confirmation screen appears.

```
PR   CH          PR   CH
01   25          06   C32
02   C08         07   C33
03   10          08   C26
04   C65         09   55
05   C31         10   C24
[▲▼◀▶]
→ OK  : EDIT
→ [✕] : DELETE
[MENU] : EXIT
```

❺ Return to normal screen
Press **MENU**.

NOTES:
● *If no sound accompanies the picture or the audio sounds unnatural on some channels, select the appropriate TV system for those channels.*
● *To delete stations with poor reception condition, refer to "Deleting a channel" (☞ 14).*
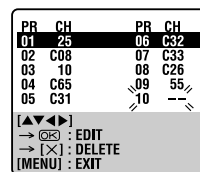
Manual Channel Set

Store channels that were not stored during Auto Set Up, Preset Download or Auto Channel Set.

❶ Access Main Menu screen, then Confirmation screen
Press **MENU**. Press △▽ to place the pointer next to "MANUAL CH SET", then press **OK** or ▷.

❷ Select position
Press △▽ ◁ ▷ until an open channel position begins blinking, then press **OK**. The Manual Channel Set screen appears.

```
PR   CH          PR   CH
01   25          06   C32
02   C08         07   C33
03   10          08   C26
04   C65         09   55
05   C31         10   --
[▲▼◀▶]
→ OK  : EDIT
→ [✕] : DELETE
[MENU] : EXIT
```

❸ Select band
Press △▽ to select CH (regular) or CC (cable), then press ▷.
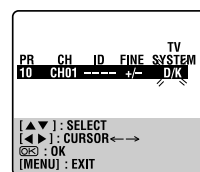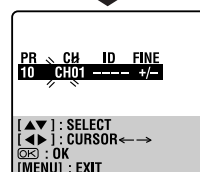
❹ Input channel
Press the **number keys** to input the channel number you want to store. Input "0" before any single number entries.
● You can set the desired station name (maximum of 4 letters). To input the station name, press ▷ until the first letter of the station name (ID) begins blinking. Press △▽ to cycle through the characters, then press ▷. Enter the remaining characters the same way (maximum of 4). After entering all characters, press **OK**.
  • The characters available for the station name (ID) are A-Z, 0-9, –, *, +, _ (space).
  • If you make a mistake, press ◁ until the incorrect character begins blinking. Then enter the correct character by pressing △▽.

```
PR   CH   ID   FINE
10   CH01 ----  +/-

[▲▼ ] : SELECT
[◀▶ ] : CURSOR←→
 OK  : OK
[MENU] : EXIT
```

NOTE:
You can only check the station name (ID) in the individual recording programme check screen.

● If you have selected a country in Central or Eastern Europe for country setting, "TV SYSTEM" setting appears. When you can see the picture but can hear no audio, select appropriate TV system. Press ▷ until D/K or B/G blinks. Then press △▽ to select D/K or B/G.

```
                    TV
PR   CH   ID   FINE SYSTEM
10   CH01 ----  +/-  D/K

[▲▼ ] : SELECT
[◀▶ ] : CURSOR←→
 OK  : OK
[MENU] : EXIT
```

Major Countries/Areas	TV System
Austria, Denmark, Finland, Holland, Italy, Norway, Spain, Switzerland, Sweden, Germany, Egypt, Western Europe	B/G
China, Mongolia, Rumania, Bulgaria, Czech Rep., Slovakia, Hungary, Poland, Russia, Central or Eastern Europe	D/K

❺ Store new channel
Press **OK**.
● Repeat steps ❷ – ❺ as necessary.

❻ Return to normal screen
Press **MENU**.

Deleting a channel

1 Access Confirmation screen

Perform step 1 of "Manual Channel Set" (☞ 13).

2 Select position

Press △▽ ◁ ▷ to until the channel you want to delete begins blinking.

3 Delete channel

Press ✕. The channel directly beneath the cancelled one moves up one line.
● Repeat steps 2 – 3 as necessary.

4 Return to normal screen

Press **MENU**.

Changing station channel positions

1 Access Confirmation screen

Perform step 1 of "Manual Channel Set" (☞ 13).

2 Select position

Press △▽ ◁ ▷ until the station you want to move begins blinking, then press **OK**. The channel number (CH) begins blinking.

3 Select new position

Press △▽ ◁ ▷ to move the station to the new position, then press **OK**.
Example: If you moved the station in position 4 to position 2, the stations originally in positions 2 and 3 each move down one space.


```
PR  CH          PR  CH
01   25         06  C32
02  C08         07  C33
03 ↘ 10↗        08  C26
04  C65         09   55
05 ↗C31↘        10  C24

[▲▼◀▶] : MOVE
[OK] : MANUAL CH SET
[MENU] : EXIT
```

```
PR  CH          PR  CH
01 ↘ 25↗        06  C32
02  C65         07  C33
03 ↗C08↘        08  C26
04   10         09   55
05  C31         10  C24

|▲▼◀▶| : MOVE → [OK]
[MENU] : EXIT
```

● Repeat steps 2 – 3 as necessary.

4 Return to normal screen

Press **MENU**.

Changing station name

1 Access Confirmation screen

Perform step 1 of "Manual Channel Set" (☞ 13).

2 Select position

Press △▽ ◁ ▷ until the desired channel begins blinking, then press **OK** <u>twice</u>. The Manual Channel Set screen appears.

3 Input station name

Press ▷ until the first letter of the station name (ID) begins blinking. Press △▽ to cycle through the characters, then press ▷. Enter the remaining characters the same way (maximum of 4). After entering all characters, press **OK**.
● The characters available for the station name (ID) are A-Z, 0-9, –, *, +, _ (space).
● If you make a mistake, press ◁ until the incorrect character begins blinking. Then enter the correct character by pressing △▽.

4 Return to normal screen

Press **MENU**.

Fine-tuning channels

1 Access Confirmation screen

Perform step 1 of "Manual Channel Set" (☞ 13).

2 Select position

Press △▽ ◁ ▷ until the channel you want to tune begins blinking, then press **OK** <u>twice</u>. The Manual Channel Set screen appears.

3 Perform tuning

Press ▷ until "+/–" begins blinking, then press △▽ until the picture is its clearest. Then press **OK**.
● Repeat steps 2 – 3 as necessary.

4 Return to normal screen

Press **MENU**.

Video Channel Set

Video channel (RF output channel) is the channel on which your TV receives picture and sound signals from the recorder through the RF cable.

Perform the following steps only if —

— Video Channel Set has not been done correctly by the Auto Set Up function (☞ 5),

— you set up the recorder's tuner by Preset Download (☞ 6) instead of using the Auto Set Up function,

— interference appears in the TV picture after you have moved to a different area or a new station has started broadcasting in your area,

— you change the connection between your recorder and TV from RF connection to AV connection, or vice versa.

If you have connected the recorder to your TV via the AV connection (☞ 4), set the video channel to off.
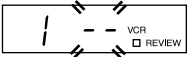
If you have connected the recorder to your TV via the RF connection (☞ 4), set the correct video channel.

> Make sure the recorder's power is off and there is no cassette inserted in the recorder.

1 Access Video Channel Set mode

Hold down ■/▲ on the recorder until the display panel shows the following.
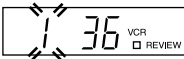
2 Set RF output system

The blinking number on the display indicates the RF output system of your country. Press △▽ to set to "1" or "2", then press **OK**. (1: B/G 2: D/K)

Major Countries/Areas	TV System
Austria, Denmark, Finland, Holland, Italy, Norway, Spain, Switzerland, Sweden, Germany, Egypt, Western Europe	B/G
China, Mongolia, Rumania, Bulgaria, Czech Rep., Slovakia, Hungary, Poland, Russia, Central or Eastern Europe	D/K

3 Set video channel

With AV connection

Press **PR –** until the display panel shows "1 – –" (or "2 – –").
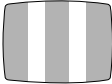
● Now the video channel is set to off.

With RF connection

Press **PR +** or **–** to set the video channel to a vacant position between 22 and 69 which is not occupied by any local station in your area.

(Example) If channel 50 is available in your area, set the video channel to 50. Then, set your TV to UHF channel 50.

● If the two vertical white bars appear clearly on the screen as shown on the right, go to step 4.

● If the two vertical white bars do not appear clearly, re-set the video channel to another vacant position and try again.

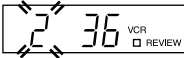## 4 Exit Video Channel Set mode

Press **OK**.

> **With AV connection**
> To view picture signals from the recorder, set your TV to its AV mode.
>
> **With RF connection**
> The channel on which the two vertical white bars appear clearly is your video channel. To view picture signals from the recorder, set your TV to the video channel.

Specifications

GENERAL

Power requirement	:	AC 220 V – 240 V∿, 50 Hz/60 Hz
Power consumption		
Power on	:	14 W
Power off	:	3.3 W
Temperature		
Operating	:	5°C to 40°C
Storage	:	–20°C to 60°C
Operating position	:	Horizontal only
Dimensions (W x H x D)	:	360 mm x 98 mm x 255 mm
Weight	:	2.9 kg
Format	:	VHS PAL standard
Maximum recording time		
(SP)	:	240 min. with E-240 video cassette

VIDEO/AUDIO

Signal system	:	PAL-type colour signal and CCIR monochrome signal, 625 lines 50 fields
Recording system	:	Rotary 2 head helical scan system
Signal-to-noise ratio	:	45 dB
Horizontal resolution	:	250 lines
Frequency range		
Normal audio	:	70 Hz to 10,000 Hz
Input/Output	:	21-pin SCART connector: IN/OUT x 1

TUNER/TIMER

TV channel storage capacity	:	99 positions (+AUX position)
Tuning system	:	Frequency synthesized tuner
Channel coverage		
VHF	:	47 MHz – 89 MHz/ 104 MHz – 300 MHz/ 302 MHz – 470 MHz
UHF	:	470 MHz – 862 MHz
Aerial output	:	UHF channels 22 – 69 (Adjustable)
Memory backup time	:	Approx. 10 min.

ACCESSORIES

Provided accessories	:	RF cable, Infrared remote control unit, Lithium battery – CR2032 –

Specifications shown are for SP mode unless specified otherwise.
E. & O.E. Design and specifications subject to change without notice.

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